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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,471	09/30/2005	Thomas Hanemann	31775-221177	4402
26694	7590	05/17/2007		
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			EXAMINER REDDY, KARUNA P	
			ART UNIT	PAPER NUMBER
			1713	
			MAIL DATE	DELIVERY MODE
			05/17/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,471	<b>Applicant(s)</b> HANEMANN ET AL.	
	<b>Examiner</b> Karuna P. Reddy	<b>Art Unit</b> 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 03 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This office action is in response to amendment filed on April 3, 2007. Applicants' have cancelled claim 9, amended claims 1-8; added claims 10-14. Claims 1-8 and 10-14 are pending.
2. In light of amendments to claims 1-8 and cancellation of claim 9, anticipation rejection of claims 1-9 in previous office action based on 35 USC 102 are withdrawn. However, the amendment necessitates new grounds of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:  
  
A person shall be entitled to a patent unless –  
  
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
4. Claims 1-5, 7-8, 10-11 and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujiyama et al (US 2003/0085387 A1).

Fujiyama et al disclose a dopant type polymer optical fibers where in these optical materials comprise at least one compound containing a carbocyclic or heterocyclic aromatic ring (abstract). As a polymer for making up the core part, any polymer can be used without any particular limitation and illustrative of these are homopolymers of methacrylic esters such as methyl methacrylate (paragraph 0136). These optical polymer materials are used as optical waveguides (page 1,

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paragraph 0002). The heterocyclic (page 4, paragraph 0065) or carbocyclic aromatic ring (page 5, paragraph 0079) may be composed of a single ring or 2 to 4 aromatic rings fused together. Illustrative of examples of these fused rings are benzofuran (page 4, paragraph 0069), benzoxazole (page 5, paragraph 0072), anthracene and phenanthrene (page 5, paragraph 0081); fluorene (page 5, paragraph 0083); carbazole with N as the heteroatom on condensed aromatic ring system (page 5, paragraph 0083).

Therefore, Fujiyama et al anticipate the instant invention.

5. Claims 1-4, 6, 10 and 12 rejected under 35 U.S.C. 102(a) as being anticipated by Heyningen et al (US 2003/0161605 A1).

Heyningen et al disclose an optical device (abstract). The optical device may be an optical waveguide which has a core region (paragraph 0206). The present disclosure is directed to an optical waveguide structure comprising a light transmitting core. The light transmitting core is an electro-optical polymer material containing an electro-optical chromophore in admixture with a polymer (paragraph 0210). In one embodiment, a polymer and chromophore may form a composition. In another embodiment a chromophore may be embedded in a polymer matrix, for example a guest/host arrangement (paragraph 0110). Exemplary polymers include polymethylmethacrylate (paragraph 0116). In a particular embodiment, the chromophore substituents or chromophores are represented by the structure  $R_5 - R_4 - R_2 - R_3 - R_2 - R_7$  (paragraph 0157)

wherein R<sub>5</sub> includes heterocyclyl (paragraph 0164). The term heterocyclyl includes 3 to about 10 membered ring structures such as 3 to about 7 membered rings, whose ring structures include 1 to 4 heteroatoms and are exemplified by phenanthridine (paragraph 0065).

Therefore, Heyningen et al anticipates the instant invention.

### ***Response to Arguments***

6. Anticipation rejection over Tymianski et al and anticipation rejection over Maxwell et al are moot in view of the amendments and new grounds for rejection.
7. In response to anticipation rejection over Fujiyama et al, applicants argue that it only deals with aromatic sulfides. Examiner maintains the rejection because there is no reference to exclusion of sulfide compounds comprising the condensed aromatic ring systems in the claim language. The claim encompasses all organic compounds comprising condensed aromatic ring system.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karuna P. Reddy whose telephone number is (571) 272-6566.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karuna P Reddy  
Examiner  
Art Unit 1713

  
DAVID W. WU  
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